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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,175	07/27/2001	Sanjay Kuttappa	DSCK-1220	9642
7590 07/28/2005			EXAMINER	
LORUSSO & LOUD 15 RYE ST SUITE 312 PORTSMOUTH, NH 03801-6846			SUHOL, DMITRY	
			ART UNIT	PAPER NUMBER
			3725	
DATE MAILED: 07/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/917,175	KUTTAPPA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dmitry Suhol	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 19-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 19-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Nakahara et al '253. Lutz discloses a thread wound golf ball containing most of the elements of the claims, including with reference to claim 1, a center (figure 2, element 10), a thread winding layer (figure 2, element 20) comprising at least one thread, a cover disposed over a core (figure 2, element 25). Lutz further discloses a thread comprised of a thermoset material as required by claim 2 (col. 4, lines 37-39 and col. 5, lines 29-34), a thread comprised of a thermoplastic elastomer material as required by claim 3 (col. 4, lines 37-39 and col. 5, lines 29-34), a thread compounded to have at least one high specific gravity filler having a specific gravity greater than 5.6 as required by claims 4-6 (col. 8, lines 46-49 and line 61-62), a specific high gravity filler being tungsten as required by claims 7-12 (col. 9, line 6).

Although Lutz discloses most of the elements of the claims, as stated above, the reference fails to explicitly teach a thread layer having a specific gravity of greater than 1.2 as required by claims 1-3. However, Nakahara discloses a golf ball which teaches that it is known to provide a golf ball with a layer (2) between the center (1) and the

cover (3) that has a specific gravity greater than 1.2 (see abstract and figure 1).

Therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention, to have provided particulars of the layer between the center and the cover (i.e. at least one thread) of Lutz with a specific gravity greater than 1.2 for the purpose of increasing the moment of inertia. Additionally, it should be pointed out that Lutz clearly teaches the addition of a high specific gravity filler to a thread layer for the purpose of controlling the moment or inertia (col. 8, lines 49-51), much like the applicant and Nakahara, therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention to have a thread layer with a specific gravity of greater than 1.2, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). Additionally, a thread layer having a specific gravity of greater than 1.2 appears to be a design choice in that applicant does not disclose any critical need for such a value (see applicant's specification page 3, lines 16-19), in other words it appears that applicants are admitting that their invention would work with a thread layer being within a wide specific gravity range. It should further be noted that although Lutz may not expressly disclose a thread layer having a specific gravity value, the range for a thread layer having a specific gravity value between the workable ranges as disclosed by the applicant is well known in the art. It is further pointed out that Table – 2 does not appear to support applicants need for a thread layer having a specific gravity of 1.2 as the table shows thread layers having a specific gravity of 0.725 and 0.777.

Applicants data table further shows no advantage to having applicants disclosed thread

layer. There is absolutely no comparative data between applicants invention and other known golf balls or other golf balls having attributes that would point out the benefit of applicants ball design.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al ' 859. Morgan discloses a golf ball containing most of the elements of the claims including, wrapping at least one thread compounded and mixed with a high specific gravity filler of steel (paragraphs 0058 and 0061), disposing a cover upon the core (paragraph 0065). The use of tungsten, as required by claim 22, would have been obvious since Morgan clearly discloses that tungsten is well known and used filler material in golf ball construction (paragraph 0053) and it has a specific gravity greater than 7.6 which is a major criteria for selecting a filler in the golf ball of Morgan (paragraphs 0061-0062).

Claims 23-25, 27-28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Nakahara et al '253 and Kakiuchi et al '142. Lutz discloses most of the elements of the claims, as stated above, and further including use of a filler with a weight of 0.1% to 30% of the thread (col. 8, lines 51-53). However Lutz fails to explicitly teach a thread winding layer having a specific gravity greater than 1.2 as required by claim 23, a ball having a calculated Moment of Inertia from 12.4 to 13.4 (g-in<sup>2</sup>) as require by claim 25, a center of a ball ranging from 1.00 to 1.48 inches as required by claim 27, a center weighing from 15 to 35 grams as required by claim 28

and a specific gravity of a center of a golf ball being 1.2 to 1.3 as required by claim 33. However, Nakahara discloses a golf ball which teaches that it is known to provide a golf ball with a layer (2) between the center (1) and the cover (3) that has a specific gravity greater than 1.2 (see abstract and figure 1). While Kakiuchi discloses a wound golf ball teaching, a ball center within a range of 1.00 to 1.48 inches (figure 2, element 1), a center weighing within a range of 15 to 35 grams (figure 2, element 1) with a specific gravity within a range of 1.2 to 1.3 (figure 2, element 1). Therefore it would have been obvious to one having ordinary skill in the art to manufacture the golf ball of Lutz with the above characteristics for the purpose of providing a durable golf ball with a longer flight/carry, initial velocity and roll distance that is within the limitations of the allowable tolerances (per regulation play). Additionally, since Lutz is clearly concerned with the Moment of Inertia of his golf ball (col. 8, lines 49-51) it would have been obvious to provide a golf ball with a calculated Moment of Inertia from 12.4 to 13.4 ( $\text{g-in}^2$ ) for the purpose of providing a with a good spin rate and spin decay, especially since golf balls with a moment of inertia in the above range are known in the art (i.e. applicants Table – 2, Ball #1) and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. It should be further noted that, it would have been obvious to have a thread layer with a specific gravity of greater than 1.2, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). Additionally, a thread layer having a specific gravity of greater than 1.2 appears

to be a design choice in that applicant does not disclose any critical need for such a value (see applicant's specification page 3, lines 16-19), in other words it appears that applicants are admitting that their invention would work with a thread layer being within a wide specific gravity range. It should further be noted that although Lutz may not expressly disclose a thread layer having a specific gravity value, the range for a thread layer having a specific gravity value between the workable ranges as disclosed by the applicant is well known in the art. It is further pointed out that Table – 2 does not appear to support applicants' need for a thread layer having a specific gravity of 1.2 as the table shows thread layers having a specific gravity of 0.725 and 0.777. Applicants' data table further shows no advantage to having applicants' disclosed thread layer. There is absolutely no comparative data between applicants' invention and other known golf balls or other golf balls having attributes that would point out the benefit of applicants' ball design.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104, Nakahara et al '253 and Kakiuchi et al '142, as stated above, and further in view of Umezawa et al '885. Although Lutz, as modified by Kakiuchi, discloses most of the elements of the claims, as stated above, the reference fails to explicitly teach a thread layer having a thickness in the range of 0.05 to 0.35 inches. However, Umezawa discloses a golf ball which teaches that it is known to produce a golf ball with a thread layer falling in the range of 0.05 to 0.35 inches (see abstract). Therefore it would have been obvious to produce a golf ball with a thread layer thickness being in the range of

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0.05 to 0.35 inches for the purpose of a variety of spin and velocity characteristics of a golf ball, especially since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 29-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104, Nakahara et al '253 and Kakiuchi et al '142, as stated above, and applicants own admission. Lutz, as modified by Nakahara and Kakiuchi, discloses most of the elements of the claims, as stated above, however Lutz fails to explicitly teach a thread layer having a thickness from 0.05 to 0.35 inches as required by claim 26, a core size ranging from 1.48 to 1.68 inches as required by claim 29, a core weighing from 30 to 40 grams as required by claim 30, a diameter of a golf ball being from 1.58 to 1.78 inches as required by claim 31, a ball weighing 40 to 50 grams as required by claim 32, and a thread layer weighing from 2.5 to 25.0 grams as required by claim 34. However, applicants Table – 2 clearly teaches that golf balls are known to have a core size that can range from 1.48 to 1.68 (balls #1 - #5), a golf ball core weight being in the range of 30 to 40 grams (balls #1 - #5), a golf ball diameter being in the range of 1.58 to 1.78 inches (balls #1 - #5) which is further known to be a standard range for golf balls diameters, a golf ball having a weight in the range of 40 to 50 grams (balls #1 - #5) and golf balls having a thread layer weight in the range of 2.5 to 25.0 grams (ball #1). Therefore it would have been obvious to one having ordinary skill in the art to manufacture the golf ball of Lutz with the above characteristics for the purpose of providing a durable golf ball



with a longer flight/carry, initial velocity and roll distance that is within the limitations of the allowable tolerances (per regulation play). Furthermore, the ranges for the above characteristics would have been obvious since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Kakiuchi et al '142 and applicant's own admission. Lutz teaches that it is known to use a high specific gravity filler (including tungsten) having a specific gravity greater than 5.6 with a weight percentage of 0.1% to 30% (col. 8, lines 46+) in any layer of a golf ball, including the thread layer as stated above and in col. 8, lines 46-48 and col. 9, line 6. Kakiuchi teaches that it is known to manufacture a golf ball comprising a thread with a specific gravity greater than 0.94 and a thread winding layer with a specific gravity in the range of 0.7 to 1.25 (col. 2, lines 54-56). Therefore it would have been obvious to manufacture the golf ball of Lutz with thread specifics, as taught by Kakiuchi, for the purpose of manufacturing a golf ball that can travel a longer flight distance, increased back spin, ease of control and pleasant feel.

Regarding the limitation of a golf ball diameter being in the range of 1.58 to 1.78 inches, it would have been obvious to manufacture the golf ball of Lutz with a diameter of the golf ball being within the above range since applicants clearly disclose that golf balls with the above range are well known in the art (balls #1 - #5), furthermore the above diameter range is known to be a standard range for golf balls diameters.

Additionally, since Lutz is clearly concerned with the Moment of Inertia of his golf ball (col. 8, lines 49-51) it would have been obvious to provide a golf ball with a calculated Moment of Inertia from 12.4 to 13.4 (g-in<sup>2</sup>) for the purpose of providing a with a good spin rate and spin decay, especially since golf balls with a moment of inertia in the above range are known in the art (i.e. applicants Table – 2, Ball #1) and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding the volume percentage of a high specific gravity thread being within the range of 0.1 to 10%, it would have been obvious to manufacture the golf ball of Lutz with the above range since the it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Kakiuchi et al '142 and applicant's own admission, as stated above, and further in view of Nakahara et al '253. Lutz, as modified by Kakiuchi and applicants own admission, lacks the explicit teaching of a core having a specific gravity of 1.0 to 1.2. However, Nakahara et al discloses that it is known to provide a golf ball with a core having a specific gravity within the above range (see abstract). Therefore it would have been obvious to manufacture the golf ball of Kutz, as modified by Kakiuchi and applicants own admission, with a core having a specific gravity in the range of 1.0 to 1.2

for the purpose of providing a golf ball with an excellent rebound coefficient without any damage to the durability of the golf ball.

### ***Response to Arguments***

Applicant's arguments filed May 6<sup>th</sup>, 2005 have been fully considered but they are not persuasive. Applicants initially argue that the examiner disregards the Lutz teaching that the filler is placed on the thread as a surface coating and that the material used for the thread of Lutz is known to have a specific gravity value of 0.95 rather than the applicants claimed value of 1.2. In response the examiner points out that the amended claim language that applicants appear to be referring to is directed to method of manufacturing the golf ball in a product type claim and thus has been given little patentable weight since it appears that the thread of Lutz has the same characteristics as the applicants thread and would perform the same function as the applicants claimed thread. In other words dipping the thread of Lutz into a high specific gravity filler bath appears to produce a thread with an adjusted high specific gravity and therefore fulfills the requirements of MPEP 2113 [R-1].

Applicants further argue that the higher specific gravity of the thread is not a design choice but rather is a critical portion of the invention. In response the examiner points out that applicants specification clearly states in paragraph 0012 that their golf ball performs equally well with any range of specific gravity above 0.94 and it appears that paragraph 0021 states that the range for S.G. of the thread layer of the golf ball may be anywhere between 0.7 to 1.25. Additionally the only data points provided by the

applicants are golf balls on the low end of the range and therefore it is the examiners position that the claimed 1.2 S.G. is not the critical portion of the invention.

Applicants further argue that Nakahara et al teaches a solid two piece core and not a thread layer. In response, the examiner points out that Nakahara is merely relied upon to teach that gold balls with a layer sandwiched between the core and cover is known to be provided with a S.G. greater than 1.2, while Lutz teaches that it is known for such a layer to be made as a thread layer.

Regarding applicants arguments with respect to the Morgan '717 reference, the examiner has corrected the oversight by changing the reference to Morgan '859.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Suhol whose telephone number is 571-272-4430. The examiner can normally be reached on Mon - Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Suhol  
Examiner  
Art Unit 3725

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